



Hulless Barley Production

Farm Facts

Produced by Saskatchewan Agriculture and Food and Saskatchewan Rural Development

Before deciding to plant hulless barley, producers should be aware that it is a specialty product which has higher value per unit weight than hulled barley. Marketplace potential, either on the producer's own farm or for sale into the feed or food industry, should be established prior to planting.

Selecting a Field

If you are planting hulless barley for a market that does not want hulled kernels, avoid fields where there may be a problem of volunteer barley of hulled varieties. Do not plant Scout into barley stubble because it has poor resistance to net blotch.

Selecting a Variety and Seed

Scout, a two-row variety, is best adapted to the brown and dark brown soil zones. The risk of yield loss to leaf diseases and lodging increases when the variety is grown outside its area of adaptation.

Condor, a new two-row variety with improved threshability and straw strength, should be available for commercial planting in 1990.

Tupper, a six-row variety, has better disease resistance and can be produced in all barley growing areas. Scout and Condor have larger kernels than Tupper and should be grown if this characteristic is required for end use. Seed of all hulless varieties should be treated with an appropriate fungicide to control seedling diseases and smuts each year.

Use certified seed. Using pure, clean seed of high germination is always a good management decision. Seed of hulless barley must be handled carefully and as few times as possible to prevent damage to the exposed embryo.

Harvesting hulless varieties intended for seed must be done with extra care to prevent damage to the kernels. This in part is achieved by leaving a percentage of unthreshed kernels. A germination test will reveal the percentage of damaged kernels.

Seeding Rate/Date/Depth

Because the embryo is exposed to potential damage, germination percentage in good seed lots of hulless barley is often lower than 90 per cent. Therefore, be sure to adjust the seeding rate to compensate for lower germination.

Hulless barley has smaller kernels than comparable hulled barley. Therefore, the seeding rate must be adjusted not only for soil conditions and germination but also for seed size to achieve the desired plant population of approximately 24 plants per square foot. Note: the bushel weight for hulless barley (58-60 lbs/bu) is similar to that of spring wheat.

For best yields, sow mid-early about the same time as for other barley varieties. Maturity of Scout and Tupper is similar to other earlier-maturing barley varieties.

Place seed at a depth of 1 1/2 to 2 1/2 inches in contact with moisture.

Fertilizer Practices

Use a soil test to determine which soil nutrients may limit growth and the amount of each nutrient needed to correct the deficiency for various soil moisture levels. Fertilizer requirements are the same as those for regular feed barley production. Excessive amounts of nitrogen should be avoided to reduce lodging.

Weed Control

Weed control practices for hulless barley are the same as those for

hulled barley. Consult the most recent copy of "Chemical Weed Control in Cereal, Oilseed, Pulse, and Forage Crops."

It is a valuable practice to assess each field for weeds and to plan your weed control program accordingly. Always read and follow label directions.

Harvesting

Hulless barley intended for use as seed should be threshed gently leaving a percentage of unthreshed kernels. Operate augers at full capacity and at slower speeds to prevent damage to the embryo.

For feed and other uses adjust the cylinder speed and concave setting to remove the hulls as completely as possible without excessively damaging the kernels.

Harvest and store at the same moisture levels used for other barley.

Use

Hulless barley yields are similar to other barley varieties except for the hulls which are left in the field. Therefore, comparable tonnage per acre is 10 to 15 per cent lower than for hulled varieties. However, since hulless barley is of higher value as a feedstuff or specialty product, it should be capable of similar or greater returns to the producer.

Hulless barley is a low fibre, high energy, high protein, high test weight feed comparable to wheat and is useful in swine and poultry feeding. If it is to be used in a feed ration, a sample should be sent to the Saskatchewan Feed Testing Lab at the University of Saskatchewan in Saskatoon for nutrient analysis. The results then can be used for ration balancing to

maximize the productivity of your livestock.

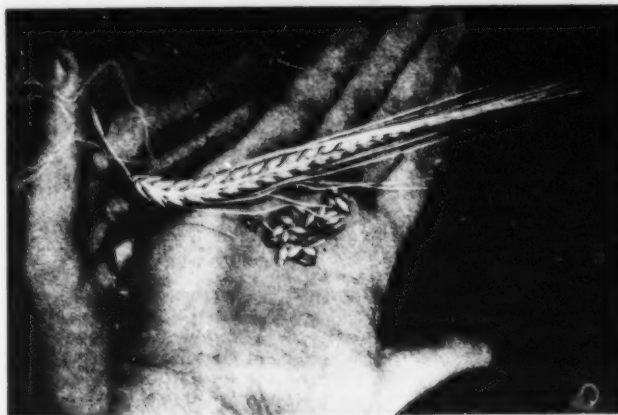
If the product is to be used in poultry rations, treatment with an enzymatic feed supplement will be necessary, as is the case for regular barley, to maximize its potential value.

Hulless barley can also be used in the pet and human food industries.

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A hand-threshed sample of two-row Scout barley showing that the kernels thresh free of the hulls.